

Application Serial No.: 10/654,891
Reply to Office Action dated April 28, 2006

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3-5, 8 and 9 are presently active in this case.

Claims 1, 3-5, 8 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberger et al. (U.S. Patent No. 6,719,921) in view of Cadeo et al. (U.S. Patent No. 4,964,732), Troope (U.S. Patent No. 3,948,490), Wong et al. (U.S. Patent No. 6,267,142), and Wong (U.S. Patent No. 6,247,903). For the reasons discussed below, the Applicant requests the withdrawal of the obviousness rejection.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicant submits that a *prima facie* case of obviousness has not been established in the present case because there is no motivation to combine the references in the manner suggested in the Official Action.

Claim 1 of the present application recites an apparatus for preparing and supplying a slurry to a chemical mechanical polishing machine. The apparatus comprises, among other features, recirculation systems each including a recirculation pump for recirculating the liquid components, draw ports each connected to a respective recirculation system for separately drawing therethrough the liquid components, feed pumps arranged on feed lines for liquid components, and at least one isolator arranged between one of the draw ports and its

corresponding feed pump, where the at least one isolator has an atmospheric vent.

The Official Action cites the Steinberger et al. reference as the primary reference, but notes on page 3 several deficiencies in the teachings of the Steinberger et al. reference. For example, the Official Action notes that the Steinberger et al. reference does not disclose “one of the isolation valves 34, 35, 36 having an atmospheric vent to provide an alternate manner to vent or drain of material from the system....” The Applicant notes that features 34, 35, and 36 are, in fact, regulating valves, rather than an isolator as recited and defined in the present application. Thus, the Steinberger et al. reference clearly fails to disclose or even suggest “at least one isolator arranged between one of said draw ports and its corresponding feed pump, said at least one isolator having an atmospheric vent,” as recited in Claim 1.

The Official Action attempts to cure the above deficiency in the teaching of the Steinberger et al. reference by citing the Troope reference. More specifically, the Official Action cites the mixing tank (54) of the Troope reference for the teaching of the isolator of the present invention, and vent line (68) for the teaching of the atmospheric vent. The Official Action concludes that “[i]n view of the teachings of the Troope reference it is deemed that it would have been obvious to one of ordinary skill in the art to further provide the feed to an intermediate an mixing tank having level sensors and an air vent which provides an function of isolation a ready supply of source fluid to a supply line the Steinberger reference and further provides a mixing of the supply fluid and venting of unwanted gasses or pressure.” However, the Applicant respectfully submits that there is no motivation in the record to replace one or more of the regulating valves (34, 35, 36) of the Steinberger et al. reference with the mixing tank (54) of the Troope reference as suggested in

the Official Action.

The Official Action suggests that one of ordinary skill in the art would have been motivated to include a mixing tank (54) of the Troope reference in the apparatus of the Steinberger et al. reference to provide a mixing of the supply fluid and venting of unwanted gasses or pressure. However, the mixing tank (54) of the Troope reference is provided in order to fluids from two supply lines (90 and 96), yet there is no need to provide mixing at the location of the regulating valves (34, 35, 36) of the Steinberger et al. reference since there is a single supply of fluid at this stage. In fact, the Steinberger et al. reference describes the use of a static mixer (14) at an appropriate location downstream of where the lines (26, 27, 28) join together. There is no motivation in the record to provide a mixing tank at the location of the regulating valves (34, 35, 36) of the Steinberger et al. reference, and thus one of ordinary skill in the art would not have been motivated to make such a combination.

Furthermore, the Applicant notes that Claim 1 recites that the at least one isolator is arranged between one of the draw ports and its corresponding feed pump, in order to provide an accurate delivery rate by the feed pump. However, the regulating valves (34, 35, 36) of the Steinberger et al. reference are not provided in such a location, and no feed pump is provided in such an arrangement. The Official Action cites lines (18, 19, 20) as the draw ports and pumps (4, 5, 6) as the recirculation pump, yet no feed pump is separately provide in the Steinberger et al. reference. Furthermore, the regulating valves (34, 35, 36) are not located between lines (18, 19, 20) as the draw ports and pumps (4, 5, 6). Thus, it is unclear why the regulating valves (34, 35, 36) of the Steinberger et al. reference are being cited for the teaching of the isolator of the present invention.

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The Applicant submits that the remaining references to Cadeo et al., Wong et al. and Wong do not cure the above deficiency in the teachings of the Steinberger et al. and Troope references. The remaining references are cited for other features, and do not disclose the isolator as recited in Claim 1.

The Applicant respectfully submits that the rejection is based on the improper application of hindsight considerations in combining the teachings of the Troope reference with the Steinberger et al. reference. It is well settled that it is impermissible simply to engage in hindsight reconstruction of the claimed invention, using Applicant's structure as a template and selecting elements from the references to fill in the gaps. *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). Recognizing, after the fact, that a modification of the prior art would provide an improvement or advantage, without suggestion thereof by the prior art, rather than dictating a conclusion of obviousness, is an indication of improper application of hindsight considerations. Simplicity and hindsight are not proper criteria for resolving obviousness. *In re Warner*, 397 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Accordingly, the Applicant submits that a *prima facie* case of obviousness has not been established with respect to Claim 1. Thus, the Applicant respectfully requests the withdrawal of the obviousness rejection of Claim 1.

Claims 3-5, 8, and 9 are considered allowable for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of Claim 1.

Claims 1-5, 8, and 9 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-8 of U.S. Patent No.

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6,767,124 in view of Wong et al., Cucci et al. (U.S. Patent No. 5,672,832), Troope, and Steinberger et al. The Applicant requests the withdrawal of the double patenting rejection for the reasons discussed below.

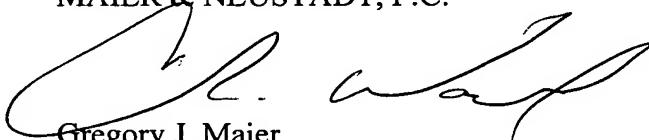
As mentioned above, the Wong et al., Troope, and Steinberger et al. references do not teach or suggest the at least one isolator as recited in Claim 1 of the present application. The Cucci et al. reference also fails to disclose or even suggest such a feature. Furthermore, the Applicant notes that Claims 1-8 of U.S. Patent No. 6,767,124 do not recite an isolator.

Accordingly, the Applicant respectfully requests the withdrawal of the double patenting rejection of Claims 1-5, 8, and 9.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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